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REMARKS

By this amendment, claims 49-55 have been added, and claims 25-37 have been canceled. Claims 1-24 were canceled in a previous amendment.

Claims 38-55 are now pending in the application. Reconsideration and allowance of all of the claims are respectfully requested in view of the foregoing amendment and the following remarks.

In the Office Action, the Examiner rejected claims 25-37 on various grounds in view of various references.

Although the Applicant disagrees with the Examiner's rejections, claims 25-37 have been canceled rendering the rejections moot. This has been done in an effort to expedite prosecution of the present application. No surrender of subject matter is intended thereby. The Applicant may decide to file the canceled claims in a continuation application.

In the Office Action, the Examiner rejected claims 38-40, 42, 46, and 47 under 35 U.S.C. 102(b) as being anticipated by Bottoms (4,345,565).

In his remarks the Examiner stated that "Bottoms teaches a fuel injection system for an internal combustion engine having... a drive assembly disposed in the drive section including a permanent magnet (column 2, lines 40-41) and a coil 28 having windings 30. One of the coil assembly and permanent magnet being capable of reciprocal movement between a first position (as seen in Figure 1) and a second position upon application of a signal to the windings (column 2, lines 36-40), the one forming a movable member 29/33."

The Applicant respectfully disagrees with the Examiner's interpretation of Bottoms. Bottoms does not teach a permanent magnet as claimed by the Applicant in both claims 38 and 47. In column 2, lines 38-40, Bottoms recites that "when electric current is supplied to the windings[,] ribs on the stator assembly become magnetically polarised[,] adjacent ribs having opposite magnetic polarity". This only describes a coil

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assembly, which becomes magnetic only when current is applied to the surrounding coil, not a coil assembly and a permanent magnet as claimed by the Applicant. A permanent magnet is a magnet that retains its magnetism after being removed from a magnetic field. Nowhere in the specification does Bottoms teach or suggest using a permanent magnet. The armature of Bottoms moves because the ribs of the coil assembly become magnetic when current is applied, and the ribs of the armature are attracted to the ribs of the coil assembly, as a result of the magnetic force. When the current is no longer applied, the armature moves back to its original position under the action of spring 32 because the ribs do not retain their magnetism (ie. they are not permanent magnets). In the Applicant's invention, the magnetic field generated by the coil interacts with the magnetic field of the permanent magnet to move the movable member from one position to the other. This interaction of magnetic fields is known as a Lorentz force. Since Bottoms lacks the permanent magnet, it does not anticipate claims 38 and 47, and claims 38 and 47 should be allowable.

In the Office Action, the Examiner rejected claims 39-46, and 48 on various grounds in view of various references.

Dependent claims 39-46, and new dependent claims 49-52 recite additional features of the invention and are therefore believed to be allowable for the same reasons recited above with respect to claim 38 and for the additional features recited therein.


Dependent claim 48, and new dependent claims 53-55 recite additional features of the invention and are therefore believed to be allowable for the same reasons recited above with respect to claim 47 and for the additional features recited therein.

In view of the above amendments and remarks, the Applicant respectfully submits that claims 38-55 are now allowable and that the entire application is in condition for allowance.

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Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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